

Supporting Information

Evaluation of the history of safe use of the maize ZMM28 protein

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Table S1: Primer pairs used in RT-PCR.

Upstream Primer Name	Sequence	Downstream Primer Name	Sequence
DP202216 5'-1	caaatccacccgtcggeacacctccgcttc	DP202216 3'-1	gatgcccacattatagtgattagcatgtcaactatgtgtg
<i>zmm28</i> -5'-1	cgtggttcgccaaaccgcgttc	<i>zmm28</i> -3'-1	gtcaagacacttgaatactgaaacgtacag
<i>zmm28</i> -5'-2	cttttccttagctctttgcctg	<i>zmm28</i> -3'-3	cacaggacagagggaaacatagtagtg

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Table S2 - Site Locations

Site Location	Soil Type	3-year Cropping History
Johnston, Iowa, USA	Loam/Clay Loam	Soybean (2014), Maize (2015), Soybean (2016)
Sheridan, Indiana, USA	Loam	Soybean (2014), Maize (2015), Soybean (2016)
Fisk, Missouri, USA	Loam	Rice (2014), Soybean (2015), Maize (2016)
York, Nebraska, USA	Silt Loam	Soybean (2014), Maize (2015 and 2016)
Guelph, Ontario, Canada	Loam	Maize (2014), Soybean (2015), Wheat (2016)
Germansville, Pennsylvania, USA	Clay Loam	Wheat (2014), Alfalfa/Orchard grass (2015 and 2016)

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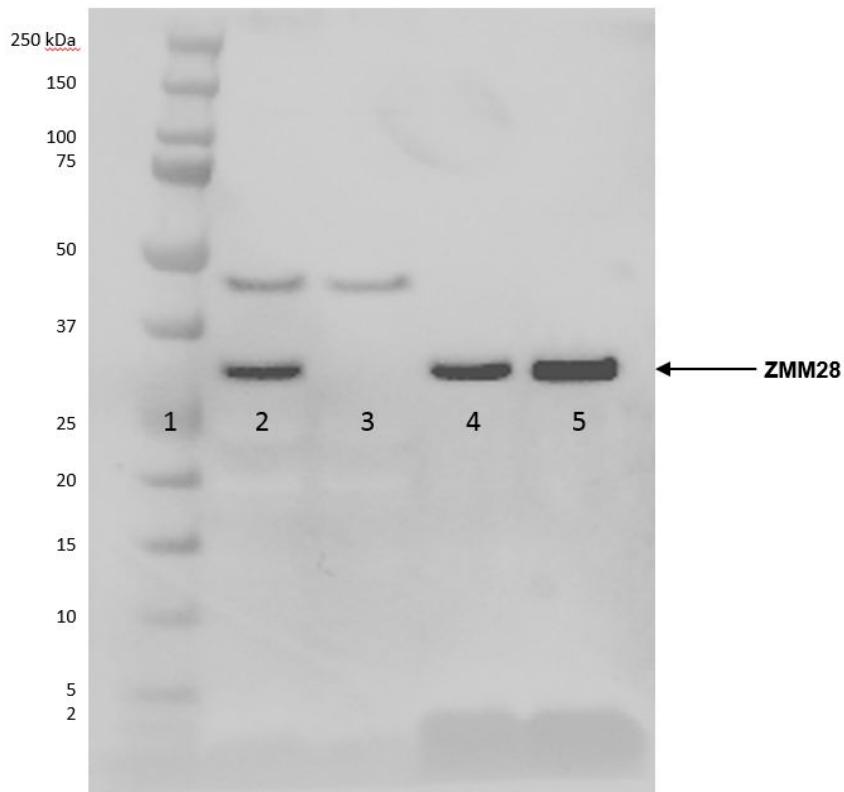
Table S3. Monthly Temperature, Rainfall, and Irrigation Data

Site	Month	2017 Weather Data					Historical Weather Data			
		Temperature (°F)			Total Rainfall (inches)	Total Irrigation (inches)	Temperature (°F)			Average Total Rainfall (inches)
		Max	Min	Mean			Max	Min	Mean	
Johnston, Iowa	May	71	50	61	2.1	0	72	51	62	4.5
	June	86	60	73	4.1	0	81	61	71	5.3
	July	90	65	78	2.6	0	85	65	75	4.8
	August	83	57	70	3.4	0	83	63	73	4.0
	September	84	56	70	5.0	0	76	54	65	3.2
	October	71	52	62	3.9	0	63	42	53	2.5
Sheridan, Indiana	May	76	56	66	0.010	0	72	51	62	4.1
	June	82	61	72	5.3	0.50	80	61	71	5.0
	July	84	65	75	8.9	0	83	63	73	4.5
	August	81	59	70	0.76	2.0	82	62	72	3.4
	September	79	55	67	0.77	0	76	54	65	3.1
	October	67	48	58	4.3	0	64	43	54	3.0
Fisk, Missouri	November	59	43	51	2.5	0	50	34	42	3.5
	May	83	62	73	2.4	0.60	79	58	69	7.5
	June	88	67	78	2.4	2.0	89	69	79	3.0
	July	92	72	82	5.4	2.1	90	70	80	4.7
	August	88	67	78	2.0	3.1	90	69	80	4.1
	September	82	58	70	0.070	0	83	61	72	3.4
York, Nebraska	May	73	51	62	7.1	0	74	51	63	4.9
	June	88	62	75	5.1	0.60	84	61	73	3.8
	July	89	66	78	6.2	1.8	88	65	77	3.4
	August	80	59	70	5.9	2.1	85	63	74	3.3
	September	80	56	68	3.9	0	78	53	66	2.4
	October	69	45	57	4.5	0	66	40	53	1.9
Guelph, Ontario	May	72	52	62	2.1	0	64	47	56	3.5
	June	79	57	68	2.4	0	74	58	66	3.1
	July	84	59	72	2.2	0	79	64	72	3.2
	August	81	54	68	3.0	0	78	63	71	3.2
	September	79	49	64	1.9	0	70	56	63	3.9
	October	68	46	57	2.6	0	59	45	52	3.6
Germansville, Pennsylvania	November	57	38	48	0.96	0	48	36	42	4.0
	May	72	54	63	2.5	0	73	50	62	3.4
	June	79	59	69	6.3	0	81	60	71	5.1
	July	83	65	74	13	0	86	64	75	5.5
	August	79	60	70	5.5	0	84	62	73	4.1
	September	77	58	68	3.9	0	77	55	66	5.2
	October	69	50	60	4.8	0	64	44	54	4.7
	November	65	44	55	0.010	0	54	34	44	3.1

Note: Weather data were reported from the planting date to the harvest date. Historical weather data were reported from 1981-2010 at sites Johnston, Iowa and Guelph, Ontario; 1987-2016 at sites Sheridan, Indiana and York, Nebraska; 2002-2016 at site Germansville, Pennsylvania; and 2007-2016 at site Fisk, Missouri. Definitions: monthly mean of daily maximum temperatures (Max), monthly mean of daily minimum temperatures (Min), and mean of Max and Min (Mean).

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Figure S1: Western Blot Results for ZMM28 Protein Derived from DP202216 Maize and Conventional Maize



Lane	Sample Identification
1	Pre-stained Protein Molecular Weight Marker
2	DP202216 Maize - Grain R6
3	Near-Isoline Control Maize – Grain R6
4	Near-Isoline Control Maize – Leaf V9
5	DP202216 Maize - Leaf V9

Note: kilodalton (kDa). Molecular weight markers were included to provide a visual estimate that migration was within the expected range of the predicted molecular weight. A non-specific band (~45 kDa) was detected by the antibody in the DP202216 maize and control maize grain.

Western blot analysis demonstrates that the ZMM28 protein in DP202216 maize (native and introduced) and control maize has the expected and equivalent size (~28 kDa).

Western blot analysis conducted using ZMM28-specific antibodies does not differentiate between the native and introduced ZMM28 protein within DP202216 maize, so plant tissues from both DP202216 maize and conventional maize were selected, based on protein expression.

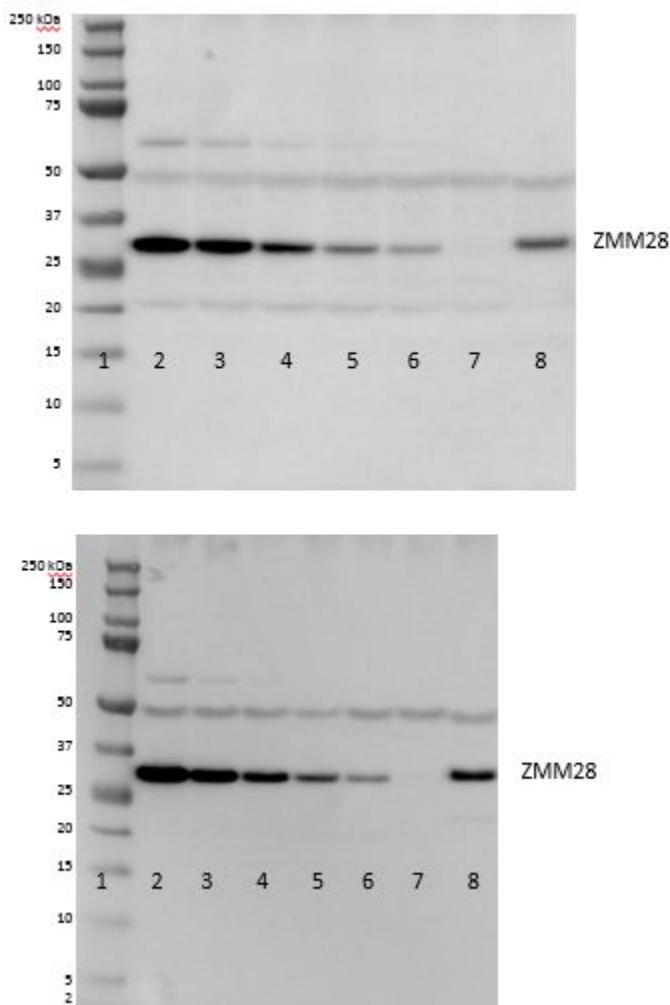
DP201226 maize expresses only the introduced ZMM28 protein in grain at the R6 growth stage (Lane 2), and both the native and introduced ZMM28 proteins in leaf at the V9 growth stage (Lane 5). The native and introduced ZMM28 proteins in the DP202216 grain and leaf samples migrated to the expected size (28 kDa). The additional band migrating at ~50 kDa in DP202216 and conventional maize grain is a non-specific band.

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Conventional maize does not express the ZMM28 protein in grain at the R6 growth stage, and no ZMM28 band is detected on western blot (Lane 3). Conventional maize expresses the native ZMM28 protein in leaf at the V9 growth stage, and the native ZMM28 protein migrated to the expected size (28 kDa; Lane 4). The relative expression level is higher in the DP202216 leaf tissue.

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Figure S2: Western Blot Results for ZMM28 Protein Derived from DP202216 Maize and Conventional Maize



Lane	Sample Identification
1	Pre-stained Protein Molecular Weight Marker
2	ZMM28 Protein standard at 4.0 ng/ml
3	ZMM28 Protein standard at 2.0 ng/ml
4	ZMM28 Protein standard at 1.0 ng/ml
5	ZMM28 Protein standard at 0.5 ng/ml
6	ZMM28 Protein standard at 0.25 ng/ml
7	ZMM28 Protein standard at 0 ng/ml
8	DP202216 Maize - Grain R6

Note: kilodalton (kDa). Molecular weight markers were included to provide a visual estimate that migration was within the expected range of the predicted molecular weight.

Western blot analysis demonstrates that the ZMM28 protein in DP202216 maize grain (R6) and the characterized protein reference standard have the expected and equivalent size (~28 kDa). Characterization of the ZMM28 protein was achieved using sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) analysis, western blot analysis, amino acid composition analysis, mass determination of the intact protein by mass spectrometry, mass

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determination of tryptic and chymotryptic peptides by peptide mapping using matrix assisted laser desorption ionization mass spectrometry (MALDI-MS), and N-terminal amino acid sequencing.

MALDI-MS analysis of the microbially derived ZMM28 protein obtained a mass of 28,189.2 daltons (Da), which is consistent with the expected mass of 28,187 Da of the protein sequence with truncation of three amino acids from the C-terminus.

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Figure S3: Multiple sequence alignment of the *zmm28* gene (cDNA sequence) in the B73 maize reference genome (Genbank accession no: NM_001111685.1; B73_reference), the native and introduced *zmm28* genes from DP202216 maize (DP202216_Ntv and DP202216_Itd), and six varieties of sweet corn, including Country Gentleman (CG-A1), Early Golden Bantam (EGB_A1 and EGB_A2), Golden Jubilee (GJ_A1 and GJ_A2), Honey N' Pearl (HNP_A1 and HNP_A2), Incredible (I_A1), and Peaches and Cream (P&C_A1). Three varieties have two alleles of the *zmm28* gene sequence (EGB, GJ, and HNP) for a total of nine sweet corn cDNA sequences. The start codons and the stop codons of the coding sequences (CDS) are marked in the alignment with green and red, respectively.

B73_reference	1	AAACCCCCGCGTCCAATCAAACACGGACAGCGGGACGAGCGAAACCACCGTGGTTCGCC
202216_Ntv	1	-----
202216_Itd	1	-----
control	1	-----
EGB_A1	1	-----
EGB_A2	1	-----
GJ_A2	1	-----CGTGGTTTCGCC
HNP_A2	1	-----
CG_A1	1	-----CGTGGTTTCGCC
GJ_A1	1	-----CGTGGTTTCGCC
HNP_A1	1	-----
I_A1	1	-----
P&C_A1	1	-----CGTGGTTTCGCC
B73_reference	61	AAACCGCTTCCTCCCATCTAAAACCGCCCCCTCCCTCCCTCTTAGCTCTCTTG
202216_Ntv	1	-----TCTCTTG
202216_Itd	1	-----
control	1	-----TCCCTGCTCTCTTG
EGB_A1	1	-----CCCTTC-TCTTCTCCTAGCTCTCTTG
EGB_A2	1	-----CCCTTC-TCTTCTCCTAGCTCTCTTG
GJ_A2	13	AAACCGCTTCCTCCCATCTAAAACCGCCCCCTCCCTCCCTCTTAGCTCTCTTG
HNP_A2	1	-----CCCTTC-TTTCTCCTAGCTCTCTTG
CG_A1	13	AAACCGCTTCCTCCCATCTAAAACCGCCCCCTCCCTCCCTCTTAGCTCTCTTG
GJ_A1	13	AAACCGCTTCCTCCCATCTAAAACCGCCCCCTCCCTCCCTCTTAGCTCTCTTG
HNP_A1	1	-----CCCTTC-TCTTCTCCTAGCTCTCTTG
I_A1	1	-----CCCTTC-TCTTCTCCTAGCTCTCTTG
P&C_A1	13	AAACCGCTTCCTCCCATCTAAAACCGCCCCCTCCCTCCCTCTTAGCTCTCTTG

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B73_reference	121	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
202216_Ntv	8	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
202216_Itd	1	-----
control	16	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
EGB_A1	26	CCTGCGCACCACTCGAGACTCGTGAGGCACCTGATCTTCCTCCGTCTCCTC
EGB_A2	26	CCTGCGCACCACTCGAGACTCGTGAGGCACCTGATCTTCCTCCGTCTCCTC
GJ_A2	73	CCTGCGCACCACTCGAGACTCGTGAGGCACCTGATCTTCCTCCGTCTCCTC
HNP_A2	25	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
CG_A1	73	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
GJ_A1	73	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
HNP_A1	26	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
I_A1	26	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
P&C_A1	73	CCTGCGCACCACTCGAGACTCGAGAGGCACCTGATCTTCCTCCGTCTCCTC
B73_reference	181	CCACACGTCCCCATCACCATTGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
202216_Ntv	68	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
202216_Itd	1	-----
control	76	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
EGB_A1	86	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
EGB_A2	86	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
GJ_A2	133	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
HNP_A2	85	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
CG_A1	133	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
GJ_A1	133	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
HNP_A1	86	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
I_A1	86	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
P&C_A1	133	CCACACGTCCCCATCACCATGCTGCGACGAGAGTGAGCGGGAGAGGGTAGGTGGCGAGG
B73_reference	241	CGGCGGAGATGGGGCGGGGGCGGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
202216_Ntv	128	CGGCGGAGATGGGGCGGGGGCGGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
202216_Itd	1	-----
control	136	CGGCGGAGATGGGGCGGGGGCGGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
EGB_A1	146	CGGCGGAGATGGGGCGGGGGCGGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC

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EGB_A2	146	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
GJ_A2	193	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
HNP_A2	145	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
CG_A1	193	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
GJ_A1	193	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
HNP_A1	146	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
I_A1	146	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
P&C_A1	193	CGGCGGAGATGGGGCGGGGCCGGTGCAGCTGCGCCGGATCGAGAACAGATCAACCGCC
B73_reference	301	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
202216_Ntv	188	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
202216_Itd	53	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
control	196	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
EGB_A1	206	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
EGB_A2	206	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
GJ_A2	253	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
HNP_A2	205	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
CG_A1	253	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
GJ_A1	253	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
HNP_A1	206	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
I_A1	206	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
P&C_A1	253	AGGTGACCTTCTCCAAGGCCCGAACGGGCTGCTGAAGAACGGCCACGAGATCTCGTGC
B73_reference	361	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
202216_Ntv	248	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
202216_Itd	113	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
control	256	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
EGB_A1	266	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
EGB_A2	266	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
GJ_A2	313	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
HNP_A2	265	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
CG_A1	313	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
GJ_A1	313	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
HNP_A1	266	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
I_A1	266	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
P&C_A1	313	TCTCGCACGAGGGTCGCGCTCATCGTCTTCTCCACTAAGGGAAAGCTCTACGAGTACT
B73_reference	421	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA

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202216_Ntv	308	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
202216_Itd	173	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
control	316	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
EGB_A1	326	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
EGB_A2	326	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
GJ_A2	373	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
HNP_A2	325	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
CG_A1	373	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
GJ_A1	373	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
HNP_A1	326	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
I_A1	326	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
P&C_A1	373	CTAGCCATTCCAGCATGGAAGGCATTCTTGAGCGTTACCAGCGTTACTCATTGAAGAAA
B73_reference	481	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
202216_Ntv	368	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
202216_Itd	233	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
control	376	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
EGB_A1	386	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
EGB_A2	386	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
GJ_A2	433	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
HNP_A2	385	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
CG_A1	433	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
GJ_A1	433	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
HNP_A1	386	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
I_A1	386	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
P&C_A1	433	GGGCAGTACTTAACCCAAGTATTGAAGACCAGGCAAATTGGGGAGATGAATATGTCCGGT
B73_reference	541	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
202216_Ntv	428	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
202216_Itd	293	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
control	436	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
EGB_A1	446	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
EGB_A2	446	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
GJ_A2	493	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
HNP_A2	445	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
CG_A1	493	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
GJ_A1	493	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
HNP_A1	446	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA
I_A1	446	TAAAATCCAAACTTGATGCACTTCAGAAGAGTCAGCTGTTAGGAGAACAAATTGA

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P&C_A1	493	TAAAATCCAACTTGATGCACCTCAGAAGAGTCAAAGGCAGCTGTTAGGAGAACATTGA
B73_reference	601	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
202216_Ntv	488	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
202216_Itd	353	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
control	496	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
EGB_A1	506	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
EGB_A2	506	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
GJ_A2	553	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
HNP_A2	505	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
CG_A1	553	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
GJ_A1	553	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
HNP_A1	506	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
I_A1	506	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
P&C_A1	553	GTTCACTGACCATAAAAGAACTCCAGCAACTGGAGCAACAACACTGGACAGTTCTTGAAGC
B73_reference	661	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
202216_Ntv	548	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
202216_Itd	413	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
control	556	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
EGB_A1	566	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
EGB_A2	566	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
GJ_A2	613	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
HNP_A2	565	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
CG_A1	613	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
GJ_A1	613	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
HNP_A1	566	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
I_A1	566	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
P&C_A1	613	ATATTAGGTCAAGAAAGAACATCAGCTCATGTTGATTCAATTCCCGCCTTCAGAAAAAGG
B73_reference	721	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
202216_Ntv	608	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
202216_Itd	473	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
control	616	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
EGB_A1	626	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
EGB_A2	626	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
GJ_A2	673	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA
HNP_A2	625	AGAAAGCACTTACAGATCAAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAACGGAGA

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CG_A1	673	AGAAAGCACTTACAGATCAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAAGGAGA
GJ_A1	673	AGAAAGCACTTACAGATCAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAAGGAGA
HNP_A1	626	AGAAAGCACTTACAGATCAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAAGGAGA
I_A1	626	AGAAAGCACTTACAGATCAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAAGGAGA
P&C_A1	673	AGAAAGCACTTACAGATCAAACGGTGTCTGAAAAGTTCATGGAGGCAGAGAAGGAGA
B73_reference	781	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
202216_Ntv	668	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
202216_Itd	533	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
control	676	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
EGB_A1	686	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
EGB_A2	686	AAAACAAGGCTTAATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
GJ_A2	733	AAAACAAGGCTTAATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
HNP_A2	685	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
CG_A1	733	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
GJ_A1	733	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
HNP_A1	686	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
I_A1	686	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
P&C_A1	733	AAAACAAGGCTTGATGAACGCGCAGCTCCGGGAGCAGCAAATGGAGCATCAACAAGCT
B73_reference	841	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
202216_Ntv	728	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
202216_Itd	593	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
control	736	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
EGB_A1	746	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
EGB_A2	746	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
GJ_A2	793	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
HNP_A2	745	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
CG_A1	793	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
GJ_A1	793	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
HNP_A1	746	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
I_A1	746	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
P&C_A1	793	CCCCCATCACTTCACCACCAATAGTCCAGATTCCATGCCAACTCTAAATATAAGGCCAT
B73_reference	901	GTCAACATAGAGGGGCAGCAGAATCTGAGTCTGAACCGTCTCCTGCTCCTGCACAAGCAA
202216_Ntv	788	GTCAACATAGAGGGGCAGCAGAATCTGAGTCTGAACCGTCTCCTGCTCCTGCACAAGCAA
202216_Itd	653	GTCAACATAGAGGGGCAGCAGAATCTGAGTCTGAACCGTCTCCTGCTCCTGCACAAGCAA
control	796	GTCAACATAGAGGGGCAGCAGAATCTGAGTCTGAACCGTCTCCTGCTCCTGCACAAGCAA

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EGB_A1	806	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
EGB_A2	806	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
GJ_A2	853	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
HNP_A2	805	GTCAACCTAGAGGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
CG_A1	853	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
GJ_A1	853	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
HNP_A1	806	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
I_A1	806	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
P&C_A1	853	GTCAACATAGAGGGGCAGCAGAATCTGAGTCAGAACCGTCTCCTGCACAAGCAA
B73_reference	961	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
202216_Ntv	848	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
202216_Itd	713	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA-----
control	856	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
EGB_A1	866	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
EGB_A2	866	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
GJ_A2	913	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
HNP_A2	865	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
CG_A1	913	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
GJ_A1	913	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
HNP_A1	866	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
I_A1	866	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
P&C_A1	913	ACAGGGGCAACCTGCCACCATTGGATGCTCCGACTGTCAAGTAA CAGGTGAGGTCTTCCC
B73_reference	1021	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
202216_Ntv	908	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
202216_Itd		-----
control	916	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
EGB_A1	926	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
EGB_A2	926	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
GJ_A2	973	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
HNP_A2	925	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
CG_A1	973	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
GJ_A1	973	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
HNP_A1	926	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
I_A1	926	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC
P&C_A1	973	AGTGTAGTTTGCAGCTGATCTGACAGCAACACACCTGTCACCGAAATGCTTCGGTGAC

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B73/reference	1081	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
202216_Ntv	968	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
202216_Itd		-----
control	976	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
EGB_A1	986	CTTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
EGB_A2	986	CTTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
GJ_A2	1033	CTTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
HNP_A2	985	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
CG_A1	1033	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
GJ_A1	1033	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
HNP_A1	986	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
I_A1	986	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
P&C_A1	1033	CCTAGATATCAACCGATGCACGATCCATCTCGATCCTGTGATCGAATACCGGCGTAGGTA
 B73/reference	1141	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
202216_Ntv	1028	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
202216_Itd		-----
control	1036	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
EGB_A1	1046	CTACTAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
EGB_A2	1046	CTACTAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
GJ_A2	1093	CTACTAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
HNP_A2	1045	CTACTAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
CG_A1	1093	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
GJ_A1	1093	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
HNP_A1	1046	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
I_A1	1046	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
P&C_A1	1093	CTACCAATAAAGTCAGGCCCGTCAAATGCTTACATGGTGATTGAAGTCTGGAGTTCT
 B73/reference	1201	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT-
202216_Ntv	1088	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT-
202216_Itd		-----
control	1096	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT-
EGB_A1	1106	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCTTTTTTT
EGB_A2	1106	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCTTTTTTT
GJ_A2	1153	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCTTTTTTT
HNP_A2	1105	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCTTTTTTT
CG_A1	1153	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT
GJ_A1	1153	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT
HNP_A1	1106	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCTTTTTT

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I_A1	1106	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCCTTTTTT-
P&C_A1	1153	CAGCACCAACCATAATTGTGTTCAGTCCTGTGTTATTGCCATAGCTACCCCTTTTTT-
B73_reference	1260	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
202216_Ntv	1147	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTT-----
202216_Itd		-----
control	1155	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTT-----
EGB_A1	1166	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
EGB_A2	1166	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
GJ_A2	1213	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
HNP_A2	1164	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
CG_A1	1212	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
GJ_A1	1212	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
HNP_A1	1165	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
I_A1	1165	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
P&C_A1	1212	CTCTGATCTACCGAGCTAGACGTAGCTTGTGCTTGGAGATTCCACTACTATGTTCCCTCT
B73_reference	1320	GTCCTGTGTATGCTTTAACGGAGATGCACGTTACCCGTGGAATATATATAAATTGCT
202216_Ntv		-----
202216_Itd		-----
control		-----
EGB_A1	1226	GTCCTGTG-----
EGB_A2	1226	GTCCTGTG-----
GJ_A2	1273	GTCCTGTGTATGCTTTAACGGAGATGCACGTTACCCGTGGAATATATATAAATTGCT
HNP_A2	1224	GTCCTGTG-----
CG_A1	1272	GTCCTGTGTATGCTTTAACGGAGATGCACGTTACCCGTGGAATATATATAAATTGCT
GJ_A1	1272	GTCCTGTGTATGCTTTAACGGAGATGCACGTTACCCGTGGAATATATATAAATTGCT
HNP_A1	1225	GTCCTGTG-----
I_A1	1225	GTCCTGTG-----
P&C_A1	1272	GTCCTGTGTATGCTTTAACGGAGATGCACGTTACCCGTGGAATATATATAAATTGCT
B73_reference	1380	GTTGTAAAGATCAAGTGGCTTTCTCCGAATGTTATGAAGTCTCAGGTGTCAAACAT
202216_Ntv		-----
202216_Itd		-----
control		-----
EGB_A1		-----
EGB_A2		-----
GJ_A2	1333	GTTGTAAAGATCAAGTGGCTTTCTCCGAATGTTATGAAGTCTCAGGTGTCAAACAT

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HN_P_A2		-----
CG_A1	1332	GTTGTAAAGATCAAGTGGCTCTTCTCCGAAATGTTATGAAGTCTCAGGTGTCAAACAT
GJ_A1	1332	GTTGTAAAGATCAAGTGGCTCTTCTCCGAAATGTTATGAAGTCTCAGGTGTCAAACAT
HN_P_A1		-----
I_A1		-----
P&C_A1	1332	GTTGTAAAGATCAAGTGGCTCTTCTCCGAAATGTTATGAAGTCTCAGGTGTCAAACAT
B73_reference	1440	GCGTGACTTTAACCTTGAACGTACGTTCAGTATTCAAGTGTCTTGACAATTGAAAC
202216_Ntv		-----
202216_Itd		-----
control		-----
EGB_A1		-----
EGB_A2		-----
GJ_A2	1393	GCGTGACTTTAACCTTGAACGTACGTTCAGTATTCAAGTGTCTTGACAA-----
HN_P_A2		-----
CG_A1	1392	GCGTGACTTTAACCTTGAACGTACGTTCAGTATTCAAGTGTCTTGACAA-----
GJ_A1	1392	GCGTGACTTTAACCTTGAACGTACGTTCAGTAT-----
HN_P_A1		-----
I_A1		-----
P&C_A1	1392	GCGTGACTTTAACCTTGAACGTACGTTCAGTATTCAAGTGTCTTGACAA-----
B73_reference	1500	CGCGT
202216_Ntv		-----
202216_Itd		-----
control		-----
EGB_A1		-----
EGB_A2		-----
GJ_A2		-----
HN_P_A2		-----
CG_A1		-----
GJ_A1		-----
HN_P_A1		-----
I_A1		-----
P&C_A1		-----